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AUTHOR Weade, Regina
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ABSTRACT

In this paper, action research is examined as a quintessential example of the relocation of the study of teaching from laboratory to classroom. Selected problematics in its practice, including the aims of inquiry, the nature of collaboration, and the anticipated audience for its outcomes are defined as inevitable challenges to be confronted. Arguments are raised to suggest the need for dynamic reconfiguration of these challenges within a situated model of the classroom context. In this way, the existence of constraints on what can occur in classrooms is acknowledged, yet possibilities for how action research might be realized are illuminated. It is pointed out that the juxtaposition of both supports and constraints in the classroom context presupposes a potential for active construction of theory/practice relationships. The paper focuses on an assorted set of investigations conducted by non-expert preservice teachers enrolled in an innovative teacher education program. A selected set of dimensions for distinguishing among alternative approaches to the nature and conduct of action research is suggested. A sample (16) of the 102 action research projects were reviewed to show the range of topical areas pursued, and to raise questions about findings and recommendations generated by the students. (JD)

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# ACTION RESEARCH:

# PROBLEMATICS AND POSSIBILITIES

Regina Weade
University of Florida

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**Action Research: Problematics and Possibilities**

Over the last fifteen years, the study of teaching has moved from the laboratory to the classroom. For most people, a change from one residence to another is not a trivial matter. Decisions about habitat are based on a variety of factors that influence the quality of life. In anticipating what a new situation will be like, assorted possessions are bundled up and the assistance of others is engaged to help with the move. Decisions are made about what should be taken, what will be important in the new situation, and what is best left behind.

Similarly, when an appropriate location for the study of teaching is considered, the likely impact on the quality of schooling is a primary concern. In deciding what the "baggage" should include, the merits of what is cherished from the past are weighed against what is needed for the future to bring about productive investigations of teaching/learning processes. As the study of teaching has moved, the effects of change are being felt at multiple levels and in diverse arenas, spanning the field from research to practice and from inservice to preservice levels of professional development.

For researchers, a variety of perspectives and research approaches, especially those derived from ethnography, anthropology and sociolinguistics, have been developed to facilitate the transition. These approaches provide both theoretically principled and systematic ways of exploring a wide range of teaching/learning phenomena as they evolve in natural classroom settings. In lieu of traditional concerns about sample sizes, inferential statistics and empirical generalizations, investigators are instead pursuing close observation, detailed documentation and description, and deliberate reflection on the processes and outcomes of instructional events. What has been gained in ecological validity is heralded as more than just compensation for what may have been lost in the abandonment of controlled conditions. The accumulation and establishment of knowledge is being derived through a case comparative perspective (Erickson, 1981, 1986; Hymes, 1977; Tripp, 1985). That is, understandings gained in one situation are subjected to successive, logical comparisons with those derived in other similar and different situations.

The movement from laboratory to classroom is not simply one of changing locations or using newly developed methods, however. As the locus of inquiry has shifted, questions about its appropriate conduct have also been raised. These questions involve matters of purpose, ownership and consequence. Teachers and educational scholars alike are concerned about who, in the name of research, is asking what kinds of questions, in what ways, for what purposes and with what outcomes. Spurred by the accountability movement, the Curriculum Reform Movement in England, and general alarm about the ever-increasing size of the gap between theory and practice, an advocacy has surfaced for research that is designed and implemented by teachers (Almy & Genishi, 1979; Cazden, Diamondston & Naso, 1988; Cochran-Smith & Lytle, 1988; Elliott, 1988; Haysom, 1985; Kemmis & McTaggart, 1982; Oja & Pine, 1983; Ross, in press; Stenhouse, 1975; Tripp, 1985). An increasing minority of teachers are conducting and sometimes publishing classroom research (CARN Bulletin; Goswami & Stillman, 1987; Nixon, 1981). The general area has been loosely identified under an assorted set of labels: action research, child study, collaborative research, and teacher research, to name a few.

Action research, the term that is quickly gaining widespread use, remains a somewhat awkward phrase. Although welcomed by many as an obvious means for bringing practice and theory together, as well as school and university personnel, others wonder how the two can be sensibly combined in a single role. What is questioned is the nature of relationship between the practical knowledge that guides classroom actions and the theoretical knowledge that is derived through research. The philosophical basis for action research, and most importantly, the establishment of its practice as a valid and justifiable contribution to a social science of teaching/learning processes, remains relatively unexplored (see Winter, 1987, for a notable exception).

This paper, however, is not about research as it is conducted by experts. It is also not about research conducted by experienced classroom teachers. Rather, it focuses on an assorted set of investigations conducted by non-expert, preservice teachers enrolled in an innovative teacher education program. As those who study teaching in the interest of becoming teachers themselves,

preservice students are probably the least able among us to comprehend the significance of the relocation of their studies. They may remain naive beneficiaries (see Note 1). However, as teacher education programs admit successive generations of students to the ranks of the profession, they function as agents of socialization. Their curricula should not only reflect changes in the professional culture of teaching, but should assume a leading edge in bringing about such changes (see Note 2). In spite of the fact that the nature of the classroom as a context for "scientific" inquiry has not been adequately examined, action research appears to be a clear and present leading edge. Thus, program developers are faced with a practical problem of "what to do" regarding inclusion of action research experiences in their teacher preparation curricula.

This study is part of a larger program of research (Weade, 1987) that is guided by one enduring question: "How can understandings about a complex, dynamic and evolving professional culture of teaching be communicated to aspiring teachers, and what conceptions of practice are being constructed by these teachers as they move toward completion of degree and certification requirements? Present purposes are twofold. First, a selected set of dimensions for distinguishing among alternative approaches to the nature and conduct of action research will be suggested. Second, 102 action research projects are reviewed to show the range of topical areas pursued and to raise questions about findings and recommendations generated by the students.

**Action Research: Translations into Practice**

Recommendations about how teachers might engage in classroom-based action inquiry do not form a homogeneous set, although a few common denominators are evident. For instance, there appears to be a shared focus on what takes place in the course of ordinary instructional events in classroom settings. The "dailyness" of life in classrooms, with its attendant contradictions and constraints on what can and will occur, is gaining renewed appreciation and respect from both inside and outside school settings (cf. Sizer, 1988). These inevitable constraints can be acknowledged and understood as part of the context within which teaching and learning occur. Proponents of action research, however, appear to be suggesting a systematic search for

situation-specific opportunities to influence learning. Further pursuit of these opportunities then leads to adjustments and changes in curriculum, instruction, and eventually, the contextual conditions under which learning is expected to occur.

In addition, there is an apparent consensus among advocates of teacher research that decisions about theory and practice are best made consciously, on the basis of close, systematic observations, principled actions, and deliberate reflection on evidence gathered by the investigators. The alternative, e.g. that decisions about schooling would be made on the basis of habit, whim or passing fancy lies somewhere outside the range of contemporary perspectives. Finally, advocates of teacher research recognize the role of the teacher as a final arbiter in the orchestration of teaching/learning events. The ways these events will either continue in familiar patterns or become targets for adjustment is, at root, dependent on the teacher's conceptions and understandings of the needs and reasons for change. Put another way, the teacher's orchestration of teaching/learning events both requires and reveals the translation of theories into classroom practices. These theories-in-use, of course, may or may not be defensible. Anders and Richardson-Koehler (1987) extend the argument by suggesting that teachers do not, in fact, use theory. Rather, they use classroom practices that may or may not be research-based. By suggesting approaches and operational strategies for teachers to engage in inquiry about their practices, advocates of teacher research are moving beyond mere acknowledgment of differences between theory and practice, at least as these have been traditionally understood. The action research movement is aimed toward bridging existing dichotomies and ultimately resolving theory/practice distinctions.

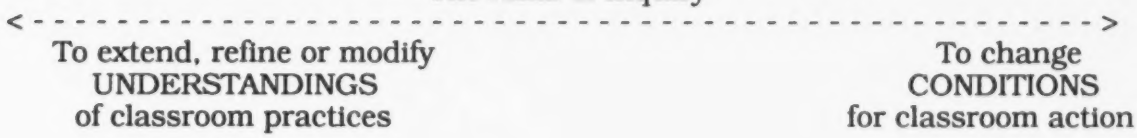
Winter (1987) argues that a philosophical basis for the establishment of action research cannot begin by either tracing its history as a movement or by reviewing existing literature on the subject. These approaches would presuppose a common definition and coherence that are presently non-existent. That is, systematic comparisons across perspectives are necessarily dependent on the assumption of a common metric. In the case of action research, such a metric would entail similar conceptions about the nature of practice and how a

practice gets built, the nature of theory and how a theory gets made, and how these conceptions either remain static or continually exist in fluid and dynamic opposition. An additional complication involves "where" these conceptions exist, e.g. in a book, "in the head", in the practice, etc., and what is determined as a result about where inquiry should begin, how it proceeds and where its outcomes are realized. When action research is defined as a collaborative endeavor that involves multiple participants, including teacher(s), consultant(s), students, administrator(s) and others, working together in a more or less ongoing fashion, these issues become even more complex. Collaboration is frequently cast as an essential "method" of action research, yet little has been done to clarify its meaning or operation as mediator of theory and practice.

In Pursuit of a Model

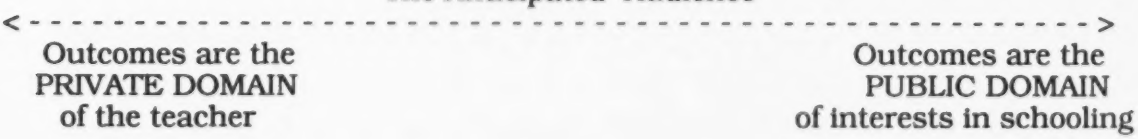
One way to begin a search for differences in the ways action research is defined and understood is to identify its apparently essential features, and to suggest ways these features might vary from case to case. For instance, at least three general dimensions, involving the aims of inquiry, the view of collaboration, and the anticipated audience to which outcomes are directed, can be represented as follows:

The Aims of Inquiry




The View of Collaboration

The Anticipated Audience




Each of these dimensions is depicted graphically as a continuous line.

Each line is then defined in terms of its extreme polar opposites. The selection is neither exhaustive nor exclusive; moreover, a position on one does not necessarily influence position on another. The purpose is heuristic, that is, to begin a dialogue for considering alternative approaches to the practice and realization of action research in programs of preservice or inservice professional development. Such a dialogue is inevitably continued as it is articulated through program development. The ways development occurs may either support or confound teachers' attempts to engage in action research.

Several issues emerge in examining the above dimensions. Although not depicted in the diagram, these issues relate to both action and research sides of the action research dichotomy. They are also inextricably linked to matters of rationality, reflexivity, ideology and validity (cf. Winter, 1987).

The Aims of Inquiry. For the classroom teacher beginning an action research investigation, decisions are necessary about which practices should become the targets for inquiry. This first dimension suggests that an overarching aim is embedded within these decisions, and further, that the particular aim can be associated with specified ends. While all attempts at action research are ostensibly focused on making changes and improvements in existing practices, matters of approach and tone suggest differences in perspective. At one extreme the perspective is interpretive. That is, the aims of inquiry are focused on gaining increased awareness of teaching/learning processes and enhanced understandings of classroom practices. Assumptions are made that the multiple theories of instruction held by a project participant are selectively amenable to refinement, modification, suspension, extension, elaboration and redefinition as the inquiry proceeds, and that adjustments in classroom practices may follow in due course. Change is not directly pursued as a virtue in its own right, but only as a possible artifact of principled actions and interactions coupled with theoretically driven reflection on the observed consequences of these actions.

Conversely, at the opposite extreme, inquiry focuses on changing conditions within which classroom actions are expected to proceed. Based on assumptions that existing practices are untenable, an improvement ethic takes precedent. Reasons to explain the current

predicaments in which schooling finds itself tend toward examination of material and ideological constraints that are inherent in institutional settings. Since these conditions are viewed as insufficient to support defensible practices, they are taken as the likely targets for change. Further, as teachers develop skills and competencies in action research, they become empowered to serve as agents of their own agendas for change. A classic example of this perspective is provided by Oja & Pine (1983). In their study, teams of teachers in two different schools addressed action research questions about the impact of scheduling decisions on the curriculum, student learning, student and teacher interactions, and opportunities for innovation. Results of the teachers' studies included recommendations that decision making processes in their individual schools should become more like the contexts they had created by engaging in a collaborative action research process. The researchers concluded that the process of action research is its most important product, and as such, is a source of potential for effecting change in schools.

The present dimension relates to the reasons, including purpose and rationale, that teacher educators, staff developers or others might endorse action research as a means of classroom-based inquiry. It is only indirectly related to any particular substantive aim teachers might select in taking on a project. Indeed, if the role of the teacher is taken to be the central focus of the action research, the selection of aim can be construed to be the full and undeniable prerogative of the teacher. A useful distinction can be made between the purpose of a project, and conversely, the purpose in a project. In the former case, purposes are associated with professional development, expansion of the teacher's institutionally-defined role, or perhaps, fulfillment of degree and certification requirements. The purpose in a project, in contrast, is directly tied to the particular practice or concern that is targeted for investigation, for example, children's attitudes toward writing, cooperative learning, motivating Johnny to complete his daily work, decisions about scheduling, and so forth. Further, an action research approach suggests that the teacher's initial intentions do not remain fixed. Rather, they are subject to reformulation and continual adjustment as inquiry evolves.

It can be argued that both interpretive and change-oriented

perspectives, that is both ends of the continuum, might be pursued simultaneously. In view of its analytic purpose, however, the present formulation dictates an either-or alternative. For instance, in any given case of action research, one aim will exist in either a prior or superordinate position to the other. Whether conscious or tacit, the selected aim will serve as both driving force and as one of the investigation's defining attributes.

The View of Collaboration. Additional decisions are needed in any given project about the mix of acquired skills and human and material resources that can be appropriated for investigating the targeted practices. As noted above, collaboration is frequently cast as an essential "method" of action research, yet little has been done to characterize its meaning or operation as mediator of theory and practice. Useful distinctions among collaboration, cooperation, collegial action, coordination, and coaching have not been advanced in the literature. Moreover, this second dimension involves matters of the scope of participation in an action research investigation. At its simplest level, it potentially distinguishes between projects that involve a single teacher, and those that involve multiple teachers. For the single teacher, the extreme would define cases in which the teacher serves as actor, researcher and chief decision maker about all facets of the investigation and about who else might be called on to participate at any given time or for any given purpose. The opposite extreme would characterize assorted staff development projects that, from the point of inception, involve multiple participants and multiple classrooms. These might be school-wide, district-wide, or for instance, a group of subject area teachers who decide to investigate an interest of mutual concern.

At a more complex level, questions can be raised about the ways collaboration operates at different points in time as an investigation proceeds. For instance, Kemmis & McTaggart (1982) propose a dialectical model for action research that consists of four distinct "moments": planning, acting, observing and reflecting. As inquiry begins, the results or outcomes of work within each element provide a framework and momentum for what is to occur in the next. At the same time, but in a reverse direction, each element also serves to extend or refine what has been discovered in preceding elements. As a single cycle is completed, a second phase of the inquiry is initiated through

reformulation (replanning) of the actions, and in turn, the observations and reflections that are to follow. The model then suggests that the inquiry continues in a dynamic fashion through an infinite number of cycles, each of which brings the investigator(s) progressively closer to articulating the nature of the classroom actions being studied.

If collaboration is similarly defined as a dynamic feature of the inquiry, it might be expected to occur within any of the "moments" of the Kemmis & McTaggart model. It might occur intermittently, and it might operate in similar or different ways within different cycles of an investigation. Further, collaboration does not necessarily imply equal roles in decision making among all participants, or equal input during all phases of a project. In a dynamic view, variations in level and focus of participation occur in response to the demands of the situation or the particular task-at-hand at any given point in time. For instance, permission to conduct "research" in a public school classroom probably involves district administrators more directly than at other points in a project. When the task involves communication with parents about a project, the teacher probably assumes a role of leadership and authority. As a new concern emerges in the course of a project, a consultant might be called upon to provide expertise in the general area. When observation and reflection are taken to be essential components of the inquiry model, and are both construed as tasks to be accomplished, questions about who should take leadership and responsibility are less clear-cut. In relation to the dimension proposed above, questions revolve around whether observation and reflection can occur as individual and independent activities, or conversely, as part of collective group processes. Out of necessity, these matters become the subject of discussion and negotiation in determining appropriate role relationships among teachers and "outsiders" . In its linear arrangement, the present dimension provides inadequate guidance. It fails to portray any potential for a dynamic view of collaboration. If the latter were possible, different action research projects could be characterized in terms of opportunities for different forms of observation and reflection (e.g., individual and group) at different points in the investigation (e.g., intermittent or simultaneous).

Developments in the Columbus Instructional Model (Bergamo, Ridgeway

& Green, 1988) suggest a straightforward and useful way of viewing both the aims of inquiry and the nature of collaboration. The framework developed by participants in this professional development project is based on assumptions that teachers bring personal knowledge to the project, and that formal knowledge derived from research can also be brought to bear on the directions taken in the project. The teachers' personal knowledge, including both formal and informal types, is essentially derived from first-hand and vicarious prior experiences in classrooms, in staff development programs and in other experiences outside school settings. The challenge in the staff development project, then, has been to find ways of bringing the teachers' personal knowledge bases together with relevant formal knowledge in order to influence what would occur in the project, as well as what could result in teachers' classrooms.

The Anticipated Audience for Inquiry. Although never very distant in the above discussion, this dimension brings the research side of the action research dichotomy squarely into focus. For instance, questions can be raised about the extent to which the action researcher's observations and methods signify participation in any given tradition of research on teaching and, in turn, how perspectives and approaches in a given tradition might influence a teacher's course of action. Similarly, questions about the validity of action research abound. Even when objective findings that could be generalized to other settings are not anticipated, matters about how a given investigation can potentially contribute to the accumulation of knowledge in the general area need to be addressed (Tripp, 1985). Otherwise, action research has no place within a social science of teaching/learning processes, and the "research" part of the dichotomy is inevitably a misnomer.

The problem of accumulating knowledge through action research involves more than simply finding strategies for disseminating outcomes, although dissemination may clearly be involved. Rather, this dimension concerns the a priori characterization of a bounded context for the investigation. At its narrowest extreme, the action researcher and/or students in the classroom might alone be defined as the "audience" of inquiry, and outcomes would then be recognized only by the participants in the form of

evolving classroom practices. At another extreme, the anticipated audience could extend to specified constituencies beyond the classroom. These potential participants might include others within the school setting, district or school board personnel, subject matter specialization groups, various research communities represented within professional organizations, the general public, and so forth. Whatever the scope, an audience cannot be construed as merely a "receiver" of outcomes. Instead, the action researcher's expectations about an audience's interests and concerns must be viewed in terms of both the opportunities and limitations afforded in its selection. Different constituencies reflect different norms and expectations about what occurs and what should occur in classrooms. They represent different cultures, and thus have different ways of perceiving, believing, acting and evaluating (Goodenough, 1971). Just as an author composes a text in light of an anticipated reader's construction and reconstruction of its meaning (Golden, 1988), an action researcher's expectations about audience will influence the ways a classroom investigation is constructed, represented and eventually understood.

Capturing the Classroom Context

Action research reflects and perhaps exemplifies the transition from laboratory to classroom for the study of teaching, yet the nature of the classroom as a context for "scientific" inquiry, implemented and conducted by the teacher, has not been explored (cf. Tripp, 1981). Under ordinary circumstances, as students and teacher interact in the classroom a variety of tasks are being constructed simultaneously. These tasks are embedded within an academic structure (cf. Doyle, 1986; Erickson, 1982; Weade & Evertson, 1988), a social participation structure (Bloome, 1987; Erickson, 1986), and an activity structure concerned with "what we are doing now", e.g. silent sustained reading, math drill, and so forth (Green, Weade & Graham, 1988; Weade & Green, in press). In other words, classroom time is "crowded" in terms of tasks to be accomplished. The addition and positioning of the teacher's "research" tasks within existing academic, social and activity structures, that is, the "action" tasks, deserves consideration.

An example from an action research project implemented by a preservice teacher illustrates the point. Initially distressed by the quality of

student participation during sharing time, her intent in the project was to encourage participation with a view of enhancing students' oral language development. The project was set in a third grade summer school classroom. Following the first week of the action phase of the project, the preservice teacher commented that in spite of careful planning, children were not participating in the ways she preferred and that it was difficult to take field notes during sharing time. Upon hearing this, other preservice students advised that she was working at cross purposes. They recommended that she devote full attention to active listening during sharing time and write field notes as soon as possible thereafter. The following week, she reported that sharing time had improved remarkably, but that her field notes were not going to be of much value due to poor memory. Her new concern was that documentation of any changes that were occurring was going to be difficult because of an overemphasis on action tasks at the expense of research tasks. This example illustrates different interpretations of how action and research can be combined in practice, e.g. simultaneous vs. intermittent, and how the issue might present a continuing dilemma for the action researcher.

In working toward a model for viewing action research in the classroom context, the dimensions discussed above can be useful. They suggest a series of challenges or problematics, especially as situated within institutional contexts, that action research will always confront. However, the dimensions are not "real". One persistent problem is evident in the way they are presented. As abstract continua, the present formulation fails to portray any of the contextually bounded realities within which action research is expected to occur. In addition, a view of aims, collaboration or audiences as static, either-or dichotomies can be misleading. Approaching a dilemma by simply selecting a preferred position on a line could generate a false sense of resolution. When resolutions of this sort are then translated into prescriptions about how action research ought to proceed, the potential for bridging theory and practice is diminished. What is needed to redirect this problem is reconceptualization of the above dimensions within a more dynamic configuration. That is, a model should account for both a context in which the phenomenon is expected to occur and the ways it may evolve over time. The advent of such a model might

then mark the possibilities of action research, not merely its problematics, in terms of constructing and transforming, not merely defining or juxtaposing, relationships between practice and theory.

Figure 1 illustrates an attempt to transform abstract dimensions through addition of a dynamic reality base. As indicated, the model is defined in terms of an inner circle representing the classroom setting. Inside the circle, "action" and "research" are depicted as an intermittent yet continual cycle of events that occur within the classroom. In contrast, two of the dimensions described above are reconfigured in such a way that they cross the outer boundaries of the classroom setting. Thus, the classroom is not a closed system. The aims of inquiry are introduced into the classroom (indicated in the model by an arrow) and are developed, extended, suspended, adjusted and elaborated as the investigation evolves (indicated by the two-way arrows). Collaborating (depicted as a winding path) is also a dynamic and evolving process that may occur both within and outside the immediate classroom setting. Discoveries recognized within the classroom can influence the nature and character of needs for collaborating and, in turn, the evolution of the action research cycle.

An anticipated audience for inquiry is depicted as a larger context within which the classroom is located. In this arrangement, the "audience" is essentially external to the classroom, yet entry is possible through support of the aims of inquiry and, conversely, invitations from the action researcher for collaborative participation. Classroom practices, the focus of all, are represented in the center portion of the model. These practices, in turn, are ultimately characterized in the ways teacher and students work together to construct classroom lessons and to involve themselves in processes of meaning construction (see Note 3).

## Lessons from PROTEACH

Recent innovations in the elementary PROTEACH program at the University of Florida provide a rich source of data for comparison and contrast with the model proposed above. In this five-year program, students enroll in a capstone course during their final semester in the program. Requirements include the design and implementation of an original classroom action research project. In order to conduct the project, each student returns to a public

school classroom, typically the classroom in which the student teaching internship was completed, and work collaboratively throughout the semester with both the classroom teacher and the university-based seminar leader (see Note 4). These individuals plus one other member selected by the action researcher compose a "review team". A proposed plan of action is submitted for district board approval. At the conclusion of the semester, each student presents outcomes and results of the inquiry at an Action Research Symposium attended by undergraduate students, faculty and school-based cooperating teachers. Each student also submits a written report of the project for inclusion in an archival collection. Ross (in press) provides a full account of rationale and structure of the course as a means for stimulating reflective inquiry.

To date, since the Master's Seminar was first offered in Spring, 1987, case study accounts of action research projects have been produced by 102 students. This collection appears, on the surface, to defy any potential for generalization , naturalistic or otherwise. Reports are sometimes lengthy; even the short ones are "wordy". The authors, whose talents as writers vary noticeably, are constrained by the time available in a single academic semester to design and implement a project, and to prepare both an oral presentation and a written description of their work. Moreover, students craft their reports to meet the perceived expectations of a potential readership that includes the university instructor, undergraduate peers, and cooperating teachers. Frequent assumptions are made that various aspects of setting, curriculum organization and school/university routines exist as common knowledge; these are therefore described in sketchy terms, or not at all. Since students are not writing to meet the standards of an academic "research" audience, structure and format that would facilitate cross-case comparisons have not been imposed. Minor variations in methods of observation and style of presentation are evident as a function of university instructor, but variations within seminar groups are also large.

**The Cumulation of Knowledge: Substantive Aims and Topical Interests**

Tripp (1985) argues that archival accounts of action research can be cumulated. In so doing, a researched case appropriate to the needs of a prospective action researcher can potentially be found to illuminate the

yet-to-be-researched situation. The sorting task falls to the university-based researcher, not the action researchers. When a retrieval system becomes established, this division of labor provides the basis for an additional form of collaboration across university and classroom settings, e.g. among the teacher educators, preservice students and school-based cooperating teachers. The method involves an initial indexing of case studies according to their features (e.g. reading comprehension, motivation, questioning) and findings (e.g. changed gender-role perceptions, improved attitudes, etc.). Based on the dimensions identified within the model discussed in this paper, additional index categories might include the aims of the inquiry (construed here as similar in characteristic to Tripp's "features") and modes of collaboration. The anticipated audience" for the 102 case studies, that is, undergraduate peers and selected public school and university faculty members, is assumed equivalent among the preservice action researchers.

Substantive Aims. In most cases, action research students frame the purpose in their projects according to a format suggested by Kemmis & McTaggart (1982), as follows:

I intend to [ . . . ] with a view of improving [ . . . ].

This structure is intended to induce the beginning action researchers to formulate a plan of action (e.g., the first component of the statement) and to ground the planned action in a set of theoretical expectations derived from literature sources and/or methods course experiences (e.g., the second component of the statement). This framework also provides a foundation for students' subsequent descriptions of actions taken and generation of comparisons between what is expected and what actually evolves. Exploration of statements of intention in the completed case studies revealed topical indicators that could be used as global descriptors of substantive aims. As illustrated in Table 1, three key words/phrases were coded from each case. For the second and third columns, each headed "focus", the actual term used by the action researcher was preserved, e.g. "learning teams", "moral reasoning", and so forth. At the same time, projects could be classified according to a more inclusive descriptor, e.g. "cooperative learning" as a descriptor of "learning teams", and "decision making" to describe "moral reasoning", in order to

facilitate comparisons across cases. In this latter case (labeled "topic"; listed in the left hand column in Table 1), the actual term or phrase may not have been used by the action researcher, and thus the category includes interpretations made in the process of data
analysis.

Topical interests. Reading and reading comprehension are the most frequently specified topical areas. This is not surprising given two salient characteristics of the program. First, reading is the most frequently chosen area for coursework concentration. For these students, the study of reading instruction comprises a more substantial portion of the knowledge being acquired than other curriculum content areas that are less frequently chosen specializations, e.g. science, social studies, instructional computing, etc. In addition, advanced coursework in reading instruction is frequently taken concurrently with enrollment in the action research seminar. Exposure to theories of reading instruction is therefore proximal and provides a plentiful range of directions that students find suitable for their action research projects.

Other topical areas listed in Table 1 also appear to be popular, including process writing, motivation and comparative learning. Concerns about writing instruction reflect emphases in language arts methods course. This choice also parallels the interests of practicing teachers whose reports of action research have been commercially published (Goswami & Stillman, 1987; Cazden et al., 1987). Motivation continues to be a perennial concern among preservice teachers. In these projects, the action researchers focused on classroom participation among low achieving students in their classrooms more frequently than on matters of whole group management. Projects in this area were almost equally divided between a) exploration of token economies and contingency reward systems, and b) efforts to enhance self-guidance through active instruction in metacognitive or other self-monitoring strategies. Both cooperative learning and motivation are frequent topics in methods course readings and discussions throughout the preservice program.

Some topical areas are unique, e.g. "adoptive grandparents", "Mexican culture", "rappin'", "computers/home" (a home/school project in which computers were signed out to parents for children's homework). These reflect

the action researchers' involvement and collaboration in special classroom or school-wide innovations. In some cases the project involved a high level of risk for the action researcher; in "adoptive grandparents", plans were made for a visit to a nursing home, but the visit was unavoidably delayed by agency officials beyond the time available for the action researcher's project (the children in the project became thoroughly prepared for the visits). In "Mexican culture", content from the arts and social studies were integrated as part of a school-wide investigation; action plans were implemented in multiple classrooms. "Rappin'" the Bill of Rights, a project designed to facilitate acquisitions of difficult subject matter, became part of a fifth grade class's entry in a district-wide social studies competition; local grant monies were secured to finance field trip arrangements.

Unfortunately, categorization of students' topics is a reductive procedure. In portraying the full range of projects, unique features within each case are lost. The interest, however, has been toward potential for retrieval, not preservation. More idiosyncratic analyses, based perhaps on principled selection of a sub-sample of projects, might be entertained in the future. Close examination of selected projects does suggest that as they evolve, the action researchers make adjustments in their intentions, or the intentions may change significantly. Adjustments and changes, when based on principled observations and deliberate reflection, are hallmarks of the action research approach. They are not simply matters of "poor planning" that can be resolved by "starting over". Further investigation of the action research process along these lines is warranted. At the least, changes in students' areas of topical interest, which would be major, are not evident in the written reports of their projects.

One additional utility for information contained in Table 1 involves consideration of sources of students' topical interests as a reflection of what is being learned in teacher education programs. As students construct their written reports, they frequently trace the sources of their interests in the chosen topic. In most cases, matters of aim, perspective and approach are derived from prior experiences in campus and field-based coursework. Throughout their program, various teaching practices have been described and modeled. Conceptions of "research", including action research, have been

deliberately taught in an undergraduate course on research on teaching. Undergraduate students also witness the perspectives and experiences of their more senior peers through attendance at the Action Research Symposium, and thus develop an anticipatory frame about what their own future projects might involve. Accordingly, description of the archival collection, which reflects culminating experiences in the program, provides at least one "mirror" for examining what students are learning through their studies of teaching. Judgments about adequacy or representativeness are possible through comparison of the collection with faculty members' perspectives on what ought to be learned in an innovative preservice program. For instance, some faculty members might appreciate a higher frequency of projects in specific curriculum content areas, e.g. math, science, social studies, etc. More definitive comparisons are also possible by focusing on a selected group of projects in any given topical area, e.g. cooperative learning, math, etc. In this way, projects might be examined in terms of the degree to which students extend and interpret ideas gained in earlier coursework, and translate these ideas into classroom practices. Thus, investigations might serve as one feedback loop for assessing the impact of coursework. As faculty members continue in program development efforts, adjustments and refinements in what this archival mirror reflects can be considered and investigated.

The Search for Meaning: Findings, Outcomes, Conclusions, Results and Recommendations

Data reported in this analysis relate to the action researcher's overall assessment of "findings" generated in this project. "Findings" is a term used loosely here to inclusively signify what others might prefer to call "outcomes", or "results". For the students, the relative appropriateness of any one term is probably dependent on personal preference or substantive characteristics within the given investigation. These students have not had extensive training in either technical writing or research methodology. Also, as described above, seminar leaders are more intent in their focus on coherence and logical rigor in the students' writing, e.g. attention to evidence based on the observed consequences of principled actions, than on specification of any standardized format. Again, standards of the "academic" research community are not

imposed. In addition, review of projects indicates an overlap between "findings" and "recommendations". For example, one student's "finding" that more time was needed is comparable to another student's "recommendation" that future action researchers should plan their time carefully.

An informal observation by the author triggered the interest in this analysis. Over the course of four different semesters, some students' self-assessments of progress have appeared to vary in patterned ways that involve a point in time in any given semester. Near the end of an implementation phase (typically 4-6 weeks in length), statements of alarm have been frequent: "My project's a total flop!", "It didn't work!", "[The children] are doing worse than when I started", or "I've got all this 'stuff', but I don't know what to do with it". Not all students express alarm; most are simply concerned about ways of making sense out of the information and observations they have compiled. Nonetheless, in response to the identified concerns of several, seminar discussions and individual conferences are held to draw students into reflection on their observations. Further, when insufficient time remains for further classroom action, conferences are needed to discuss the students' options in drawing closure on their projects. In spite of students' serious concerns, changes in their self-assessments have been noted during the oral presentations at the Action Research Symposium. Although students typically report some of the difficulties they've encountered, several "total flops" are miraculously transformed into enviable "successes". Therefore, the relevant entry question guiding this analysis became: do action researchers' "findings" suggest a) pursuit of a single ideal strategy (e.g. "what 'works", or conversely, "what didn't 'work'"), or b) involvement in a continuing search for extended or elaborated understandings of teaching/learning processes.

Sample selection. Recourse to students' written reports affords obvious limitations in what can be learned about the informally observed phenomenon described above. End-point stresses are frequently not explicitly documented, one way or the other, in what the action researchers write. Under the assumption that students' search strategies might be embedded in what they do write, patterns were judged worthy of pursuit.

Examination of written documents for this analysis proved to be a

monumental task. Many students reported multiple "findings" that ranged from idiosyncratic frequency counts to identification of general trends in their observations and reflections. Two techniques were used to reduce the volume of data. First, a sample was drawn to include the first two projects, selecting alphabetically by students' last names, from each of 8 different sections of the seminar (e.g. involving four different seminar leaders). This arbitrary procedure yielded a sample of 16, or 15% of the total number of projects, and was judged sufficient for initial pattern identification. Second, assuming that students' perceptions of educationally significant discoveries would be located near the end of their reports, exploration was confined to the final four pages of the written documents (not counting appendices). Tabulation of "findings", "results", "outcomes", "conclusions", is provided in Table 2. Students "recommendations" are presented in Table 3. The latter include statements of advice from the action researcher to others about classroom practices and/or the conduct of further action research.

Pattern Identification. Examination of Tables 2 and 3 illustrates variations in style in a) expository vs. first-person narrative writing styles, b) level of detail and specificity in describing evidence for assertions, and c) attribution of reasons or explanations for observed consequences of the actions taken. The latter variation is relevant for exploring the question guiding this analysis, that is, the nature of search and the object(s) of search in action researchers' reports of their investigations.

Limited time is frequently raised as an issue by the students, yet differences in its treatment can be identified. For some, scarce time is a way of accounting for observations of "no difference", or less than desirable influence on student performance (cases 12, 13, 14). In these situations, time appears to operate as an imposed, external factor over which the action researcher has little control. Additional factors that might operate internally within a given time frame, e.g. those more intimately connected to the role of the action researcher in collaborating, designing and implementing the project, are not evident in these case reports. In other cases however (cases 3, 4, 7, 11), the action researchers report subtle differences and emerging patterns in children's responses to their classroom practices. In these cases, the action

researchers appear to be confident and optimistic about the impact of their actions. Although time is treated as an unfortunately scarce commodity, it is not viewed as a single important contributor to project outcomes. Further, additional time does not appear to be regarded as a resource that would make a "success/failure" difference, but rather, one that would simply make observed differences more pronounced (especially, cases 5 and 11). Thus, a patterned progression is evident across these selected cases. For some, attribution of reasons or explanations for project outcomes is severely limited. Emphasis is placed, as if by default, on matters of time. For others, attention is directed to descriptions of observed changes in patterns of behavior among children participating in the project. Partly through recourse to testimonial statements, or by citing the high positive regard of cooperating teachers, these action researchers validate both the rational course of their actions and the positive impact on the children involved in their projects. The absence of "measurable" differences seems to be regarded as a problem only if there is a need to justify the results to others; further evidence is apparently not needed to convince the action researchers of the efficacy of their own findings. In the former cases, the action researchers' treatment of time as an important variable may be indicative of a search for an ideal strategy, e.g. one that can be recommended to others as a practice that "works". In the discussion that follows, this unfortunate predicament is viewed as an outgrowth of an inherent and unadvised "logic" that students sometimes bring to the task of doing "research". The latter cases, in contrast, suggest that the action researchers have identified situated, context-specific knowledge about the particular classroom practices being examined, and are engaged in a continuing search for extended understandings of teaching/learning processes.

In most reports in this sub-sample, assessments appear to be embedded within an assumed pre-/post comparison strategy. At the outset, many students begin planning for the project by deciding to collect what they refer to as "baseline data". The rationale is typically twofold: to demonstrate the existence of some less than desirable condition in the existing classroom practice (or to justify the need for the selected focus), and to set the stage for further assessment and comparison following implementation of the planned action.

The apparent intention, although it is rarely specified in writing, is to attribute reasons for any "measurable" differences to the actions demonstrated and documented by the action researcher. These implicit pre-/post comparison strategies evolve, even though experimental or quasi-experimental research designs are not illustrated in any of the seminar readings or other materials available to students about conducting an action research project. The logic of the design, although naively informed and constructed, is intuitively appealing to students. Any conceivable intentions to better understand a practice are overshadowed by students' certainties that they will validate the superiority of an idealized "best" practice. In due course, suggestions that "baseline data" are not needed, (e.g. actions might proceed on the basis of the action researchers' observations, reflections and principled judgments about best practices) do not, in contrast, hold immediate appeal for many of the students.

Fortunately, and in spite of the implicit pre-/post logic, students' observations and reflections frequently go beyond the narrow accounting that their measurement devices can insure. Some reports of action research (note especially case 11) are distinctive in that discoveries appear to have been unanticipated at the outset. In this case, the action researcher communicated what she believed to be her most important finding in the title of her project: Children CAN and DO Write Willingly (emphasis in original). In another case (note recommendations, case 5), reflection on the impact of selected observation techniques suggested that the techniques functioned in unexpected ways; interviews with children provided more information for children about the action researchers' intentions than the other way round, and the project was enhanced as a result. As projects evolve, these emergent findings are observed with a sense of welcome surprise (see Note 5). Subsequent descriptions, evident in the students' written reports, suggest a departure from naive pre-/post comparisons toward a reflective appraisal of teaching/learning phenomena in situated classroom contexts. In short, conditions are set and possibilities are constructed for action researchers to move beyond a search for "what works."

**Conclusion**

In this paper, action research has been examined as a quintessential

example of the relocation of the study of teaching from laboratory to classroom. Selected problematics in its practice, including the aims of inquiry, the nature of collaboration and the anticipated audience for its outcomes, have been defined as inevitable challenges to be confronted. Arguments have been raised to suggest the need for dynamic reconfiguration of these challenges within a situated model of the classroom context. In this way, the existence of constraints on what can occur in classrooms are acknowledged, yet possibilities for how action research might be realized are illuminated. The juxtaposition of both supports and constraints in the classroom context presupposes a potential for the active construction of theory/practice relationships and thus, opportunities for contribution to an action science of teaching/learning processes.

The implementation of action research as a form of professional development activity in preservice and inservice teacher education programs provides opportunities for close examination of its processes and outcomes. In this paper, description of an archive of written case accounts and ways similar archives might be cumulated and explored have been illustrated. Portrayal of a range of action researchers' topical interests provides a scaffold from which additional questions about the students' interests and intentions can be posed. Specifically, these questions involve identification of the sources of preservice students' ideas, e.g. theories and classroom practices, and the ways in which campus-based experiences are extended, elaborated and transformed through translation into classroom practices. The following questions are suggested as ways for investigating what action researchers are accomplishing in their studies of teaching.

1. Does the action researcher speak to or revisit "theory"? Where do these theories reside, e.g. in a book, in a course, "in the head", or in the practice? To what extent does the action research effect a "relocation" of theory?

2. When action researchers tell their stories by constructing testimonials, are the testimonials grounded in inquiry on common-sense practices, or are the practices research-based?

3. Is the action researcher's intent to impress others with "theoretical" formulations, or to stir others to action?

As action researchers' projects evolve, emergent findings are frequently observed by the students with a sense of welcome surprise. In making sense of these findings, they construct testimonials to tell their stories and to stir others to action. These descriptions mark a departure from naive pre-/post comparisons and, thereby, a movement that goes beyond the search for an ideal model. When preservice teachers are able to engage in reflective appraisal of teaching/learning events within situated classroom contexts, understandings about classroom processes are extended, elaborated and refined. As these teachers enter their first years of professional practice, the likelihood that their studies of teaching will cease is diminished. Rather, if provided at least minimal institutional support, possibilities for engaging in a continuing search for meaning about teaching/learning processes are maximized.

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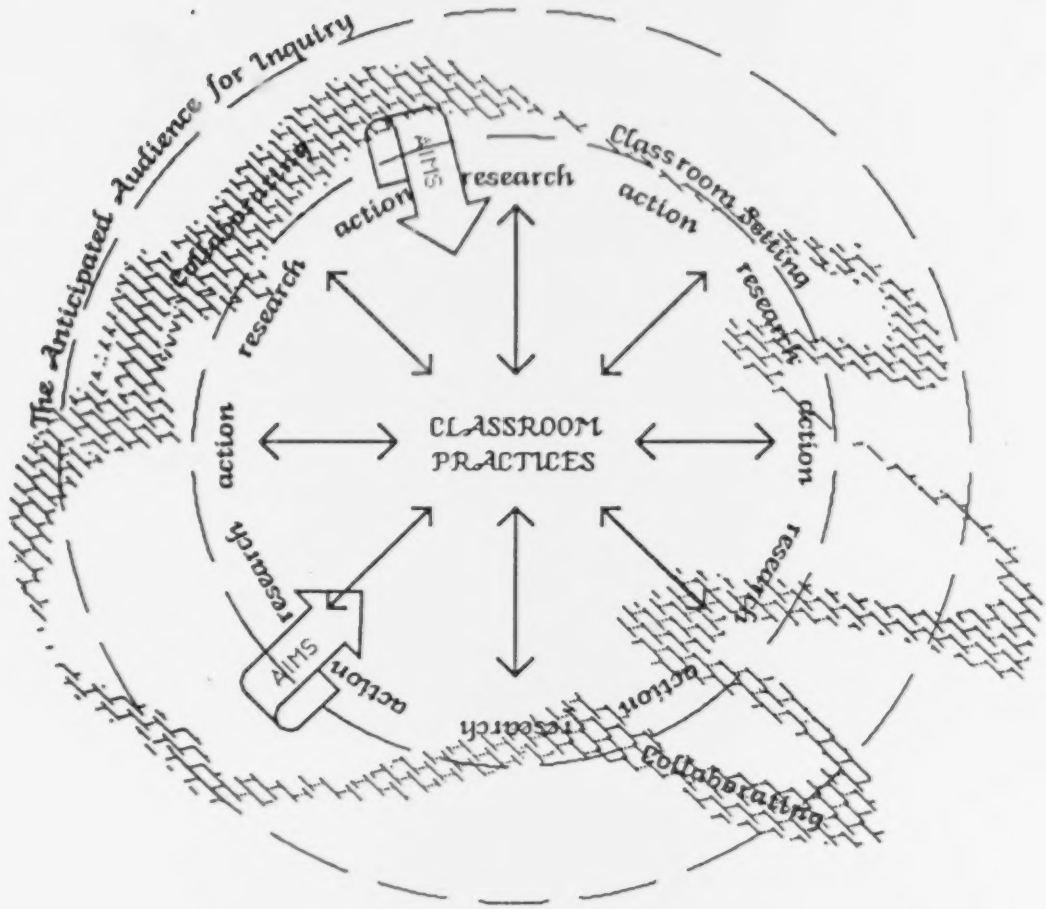


Figure 1. Model of action research process in the classroom context.

Table 1. Topical indicators of substantive aim(s) in action research projects.

| Inclusive Category | Focus | Focus |
|---|---|---|
| Adoptive grandparents | Preparation experiences | Attitudes |
| Arts/Social Studies | Creative expression | Mexican culture |
| Circle time | Activities | Participation |
| Computers/home | Vocabulary | Reading |
| Cooperative learning | Comprehension | Social studies |
| Cooperative learning | Interracial relations | Attitudes |
| Cooperative learning | Isolates | |
| Cooperative learning | Learning teams | Spelling lessons |
| Cooperative learning | Math | |
| Cooperative learning | Positive interactions | Human development |
| Cooperative learning | Positive interactions | Human development |
| Cooperative learning | Positive interactions | Human development |
| Cooperative learning | Positive interactions | Human development |
| Creativity workshop | Using homeroom time | Creative expression |
| Gender-role | Stereotypes | Attitude flexibility |
| Gender-role | Stereotypes | Attitude flexibility |
| Gender-role | Stereotypes | Teaching strategies |
| Health curriculum | Hygiene | Hygiene behaviors |
| Higher order questions | Science | Comprehension |
| Isolates | Guided instruction | Peer acceptance |
| Language arts | Alphabetizing | Motivation |
| Learning centers | Academic focus | Enrichment |
| Literature program | Supplemental reading | Language development |
| Low achievers | Attitudes | Interest-guidance |
| Management | Non-punitive strategies | Role-playing |
| Management | Reinforcement strategies | Small group |
| Math | Precision teaching | Accuracy/fluency |
| Motivation | Daily seatwork | Task engagement |
| Motivation | Daily seatwork | Task engagement |
| Motivation | Daily seatwork | Task engagement |
| Motivation | High achievers | |
| Motivation | Seatwork | Task management |
| Motivation | Self-guidance | Metacognition |
| Motivation | Task Engagement | |
| Motivation | Task Engagement | |
| Motivation | Task Engagement | Self-monitoring |
| Motivation | Task Engagement | Self-monitoring |
| Motivation | Math | Self-monitoring |
| Oral language | Social studies | Rappin' |
| Peer tutoring | Math | Ability grouping |
| Problem solving | Classroom strategies | Decision making |
| Problem solving | Moral reasoning | Peer relationships |
| Problem solving | Divergent thinking | Logical deductions |
| Questioning | Inferencing | Thinking skills |
| Reading | Basal-based strategies | Individualization |
| Reading | Bibliotherapy | Friendly interactions |
| Reading | Content area | Social studies |
| Reading | Cross-age pairs | Oral Fluency |
| Reading | Cross-age pairs | Concepts about print |
| Reading | Echo reading | Sight word fluency |
| Reading | Enrichment activities | Whole group |
| Reading | Guided silent reading | Motivation |

Table 1 (continued)

| Inclusive Category | Focus | Focus |
|---|---|---|
| Reading | Individualization | Sight words |
| Reading | Imitative reading | Taped trade books |
| Reading | Key vocabulary | Attitudes |
| Reading | Literature-base project | Self-concept |
| Reading | Letter recognition | Remediation |
| Reading | Motivation | Whole language |
| Reading | Paired reading | Attitudes |
| Reading | Peer tutoring | Fluency |
| Reading | Prediction strategies | Low group |
| Reading | Story parts | Recreational reading |
| Reading | Reading aloud | Attitudes |
| Reading | Reading aloud | Attitudes |
| Reading | Reading centers | Attitudes |
| Reading | Recreational reading | Sharing time |
| Reading | Repeated reading | Sight words |
| Reading | Silent sustained reading | Attitudes |
| Reading | SSR/Booktime | Sharing time |
| Reading | Story parts | |
| Reading | Trade books | Task engagement |
| Reading | Trade books | Attitudes |
| Reading | Word recognition | Vocabulary drills |
| Reading comprehension | Dictated stories | Sight word fluency |
| Reading comprehension | Illustrations | Individualization |
| Reading comprehension | Listening comprehension | Performance/attitude |
| Reading comprehension | Motivation | Metacomprehension |
| Reading comprehension | Partner reading | Retelling |
| Reading comprehension | Story structure | Writing skills |
| Reading comprehension | Vocabulary | Words in context |
| Sharing time | Oral language | Participation |
| Sharing time | Student participation | Group interaction |
| Social skills | Empathy | Peer interactions |
| Social skills | Peer interactions | |
| Social skills | Tatle-taling | Conflict solving |
| Sociodramatic play | Learning centers | Language development |
| Sociodramatic play | Play training | Adult intervention |
| Study skills | SQ3R Comprehension | |
| Writing | Class newspaper | Editing |
| Writing | Conferences | Attitudes |
| Writing | Field trips | Language experience |
| Writing | Invented spellings | Early print skills |
| Writing | Journals | |
| Writing | Journals | Class publication |
| Writing | Journals | Writing development |
| Writing | Journals | Writing development |
| Writing | Journals/letters | Language experience |
| Writing | Peer-editing | Self-editing |
| Writing | Writing as process | Attitudes/performance |
| Writing | Writing as process | Attitudes |
| Writing | Writing workshop | |
| Writing/reading | Author's chair | Writing performance |

Table 2. Findings in sample of action research projects.

| Case | Findings |
|---|---|
| 1 | - teaching questioning techniques seems to influence children's participation in sharing time.<br>- planning for sharing time with "reminders" sent home was helpful.<br>- the quality of "things" brought in to share improved over time (more meaningful things were brought). |
| 2 | - the cooperating teacher reported increased interest in choosing books for SSR (when action researcher was not in classroom).<br>- students chose increasingly more difficult books.<br>- book sharing was the most popular among students.<br>- SSR increased frequency of independent reading. |
| 3 | - miscues decreased slightly; self-corrections increased<br>- pausing during oral reading didn't change; rate of reading increased.<br>- cross-age pairing influences attitudes and abilities more for Grade K-4 pairs than for Grade 2-5 pairs.<br>- more time would be needed to see impact. |
| 4 | - more time would have made results more impressive.<br>- sight word recognition increased from "about half of the 20 to 15, 16 or 17 of the 20 words".<br>- confidence and self-esteem improved. |
| 5 | - although self-guidance was achieved with only one out of the twelve children, it was found that general metacognitive awareness can be developed (more time was needed).<br>- the child's perception of who s/he will be completing her/his work for is a predictor of how successful s/he will be in completing her/his assignments.<br>- the project was unsuccessful in its attempt to have children choose or create a strategy that suited their personal learning style. This particular group of second grade children were subject to peer conformance behavior and gender conformance behavior. |
| 6 | - first graders reported negative attitudes about reading, and about school.<br>- 5 out of 6 children reported they enjoyed literature-based reading activities, and that their friends enjoyed listening to them read out loud.<br>- organized group activities can foster positive social relations, love of learning, and self-esteem.<br>- pressures for testing and accountability should be balanced with enrichment activities. |
| 7 | - time was insufficient.<br>- students were eager to read and share experiences. |
| 8 | - partner reading is more effective than listening or read/retell strategies.<br>- alternatives to basal series books are useful supplements. |
| 9 | - allow time and practice for children to adjust to cooperative groups.<br>- for young children (K-1), cooperative activities need to be highly structured, and roles may need to be assigned.<br>- cooperation requires active teaching. |

(Table continues)

Table 2 (continued).

| Case | Findings |
|---|---|
| 10 | - tape recorders with headphones were useful for easily disturbed children (improved task engagement).<br>- individual conferences about work completion were motivating for students. |
| 11 | - children's attitudes toward writing improved . . . but also, the quality of the children's work improved according to my cooperating teacher's professional judgment.<br>- I was amazed at the change that occurred as a result of only a few implementations in a short period of time.<br>- . . . disappointment at not being able to reach all of the children and perform any miracles . . . that will require more time, energy, experience and insights into the writing process.<br>- . . . children can and do write willingly when they have something about which to write. When asked to write about a topic or situation on which we had spent considerable time, the result were overwhelming . . . . the children were highly motivated to write about topics not usually discussed such as "hate", "being mean", and "bragging". The content and quality of such writing improved over previous writing for many of the children. |
| 12 | - . . . time limitations made it difficult to improve children's attitudes toward reading and writing.<br>- . . . low achieving students had come to believe that reading and writing are not something one does for fun.<br>- . . . the (key) vocabulary approach was more successful than the vocabulary instruction the children had received in spelling and reading lessons.<br>- . . . although I may not be able to teach the disabled reader to be afluent reader, I can make a difference through such approaches as the key vocabulary approach. |
| 13 | - I discovered lack of individual attention, background knowledge, and stress of a heavy workload are major limitations that can affect students' abilities to learn to read . . . . individualized attention would be the most difficult strategy to implement because of the time factor involved.<br>- . . . there is value in being prepared.<br>- incorporation of art and music into a reading lesson created an enthusiasm and added interest in reading on the part of the students.<br>- through implementing strategies of the whole language approach, children can be motivated to read and enjoy reading . . . they were excited that they could read language experience charts and wanted to read them to their peers. The print-rich environment . . . puts children at ease when faced with words on a printed page . . . . individual attention . . . helped boost their self-confidence and made them feel good about themselves and school. |
| 14 | - revision skills (in writing) need to be taught.<br>- in pre- and post writing samples, punctuation did not improve, (but) quality (length, "schema") did improve.<br>- complexity of the project combined with short time allotted may have overwhelmed the students. |

Table 3. "Recommendations" from action research projects.

| Case | Recommendations |
|---|---|
| 4 | - review is important following holidays; children forget.<br>- a variety of oral reading methods should be used, such as echo reading and choral reading.<br>- the action research project is a real learning experience for the researcher and should be approached as such. You do not start knowing all the answers and when you finish, you do not know them either. This is truly a case of the process being as important, if not more so, than the product. |
| 5 | - informally interview your students. Information . . . gained . . . invaluable . . . . (limit) questions to five pertinent ones . . . approximately one hour to interview a class of 24 . . . . a significant amount of time (but) the information yielded is worth the effort.<br>- beware of the influences of order of presentation of class assignments . . . . discover what assignments give your students difficulties and present the most difficult first.<br>- use a learning orientation . . . encourage students to take responsibility for their own learning.<br>- allow time at the beginning to acclimate the students to your presence in the class.<br>- be assertive in your rights to keep the students in your project the entire time needed to carry out your project.<br>- if necessary, find a place to conduct a project outside of the classroom (to avoid distractions and pull-outs by teaching aides).<br>- do not conduct an action research project on a topic to please someone other than yourself! Find a topic that you are truly interested in and have a desire to find out more about. |
| 8 | - note your concerns during [student teaching].<br>- be very organized.<br>- keep up your log; it will prove to be more beneficial than you expect. |
| 9 | - get to know your students well.<br>- be flexible.<br>- develop good lines of communication between yourself and members of your review team; these people will be essential.<br>- visit once or twice before implementing action (to get re-acquainted with the children and let them get re-acquainted with you).<br>- as you choose team members, consider choosing one you have previously confided your classroom experiences (sic).<br>- be flexible! |
| 11 | - teacher modeling before and during an activity is important because children will see that the task required of them is important enough for an adult to perform. |